

10/524224**DT01 Rec'd PCT/PTC 09 FEB 2005****Amendments to the Claims:**

Please cancel claims 1-17 as presented in Amended Sheets 17-19 of the underlying International Application No. PCT/DE2003/002603.

Please add new claims 18-34 as indicated in the listing of claims below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-17 (cancelled)

Claim 18 (new): An electrochemical cell comprising:

- a) a separator plate; and
- b) a channel structure for supply, circulation and discharge of fluids used in an operation of the electrochemical cell;
- c) the channel structure being formed on the separator plate and including at least one fluid flow channel;
- d) an element arranged within the at least one fluid flow channel for independent control of at least one fluid flow;
- e) the element being arranged and configured to change a flow cross section of the at least one fluid flow channel.

Claim 19 (new): The electrochemical cell of claim 18 wherein the element comprises at least one bimetal element arranged in the at least one fluid flow channel.

Claim 20 (new): The electrochemical cell of claim 19 wherein the bimetal element operates to reduce flow cross section of the channel by a thermally induced change in shape when there is a change of fluid temperature.

Claim 21 (new): The electrochemical cell of claim 19 wherein the bimetal element comprises a

separate, plate-shaped bimetal element fastened by an end to a wall of the channel.

Claim 22 (new): The electrochemical cell of claim 19 wherein the bimetal element comprises a tongue-shaped notched portion formed on a wall of the at least one fluid flow channel and a plate-shaped element connected to the notched portion over a surface area of the notched portion.

Claim 23 (new): The electrochemical cell of claim 19 wherein the at least one bimetal element comprises a plurality of bimetal elements fastened by an end to a wall of the at least one fluid flow channel, the bimetal elements being arranged and configured to rise upon an increase in temperature of a fluid in the at least one fluid flow channel.

Claim 24 (new): The electrochemical cell of claim 18 wherein the element comprises at least one element arranged and configured to increase in volume upon an increase in moisture in the at least one fluid flow channel.

Claim 25 (new): The electrochemical cell of claim 24 wherein the element is fastened to a wall of the at least one fluid flow channel.

Claim 26 (new): The electrochemical cell of claim 25 wherein the at least one element comprises two elements arranged in a pair lying opposite one another in the fluid flow channel.

Claim 27 (new): The electrochemical cell of claim 24 wherein the element is integrated into a wall of the fluid flow channel.

Claim 28 (new): The electrochemical cell of claim 27 wherein the wall is arranged to separate a cathode fluid channel from a cooling fluid channel, the element comprises a water-permeable material on a side of the wall facing the cathode fluid channel and comprises an elastic, water-impermeable material on a side of the wall facing the cooling fluid channel.

Claim 29 (new): The electrochemical cell of claim 18 wherein the channel structure is formed to

include parallel fluid flow channels for a cooling fluid, each channel including at least one element.

Claim 30 (new): The electrochemical cell of claim 18 wherein the channel structure comprises a number of regions and a plurality of fluid flow channels, each with at least one element.

Claim 31 (new): The electrochemical cell of claim 30 wherein, for fluid communication between the channels, and over different regions, there is formed a connection between the fluid flow channels.

Claim 32 (new): The electrochemical cell of claim 31 wherein the at least one element of each of the plurality of fluid flow channels control fluid communication between the regions.

Claim 33 (new): The electrochemical cell of claim 30 wherein the fluid flow channels of the plurality of fluid flow channels run parallel to one another in the direction of a fluid flow in the number of regions and the connections being formed between the channels after each region, the at least one element of each channel being arranged in a downstream region for controlling fluid flows region by region.

Claim 34 (new): The electrochemical cell of claim 33 wherein the fluid flow channels of the plurality of channels run parallel to one another in a first region, are in fluid communication with one another in a second region and run parallel in a third region, the at least one element in each channel being arranged in the third region.